The impact of a virtual reality training programme on health professionals' knowledge, understanding and empathy

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The impact of a virtual reality training programme on health professionals' knowledge, understanding and empathy

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Research Team

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Commissioned by: Western Health and Social Care Trust Northern Ireland in collaboration with Institute of Health and Nursing Research, Ulster University

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Background

- A ‘greying population’, Internationally and nationally
- Rising numbers of people with Dementia
- Significant impact on health resources (1% of Global GDP)

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Background

Hospital admission has a significant impact on People with Dementia with:

- Greater distress
- Longer stay in hospital
- Higher 1 year morality rates
- Greater likelihood for institutionalisation

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Background

Staff Views

- Staff feel unprepared to deal with dementia

- Need for new and innovative ways of training

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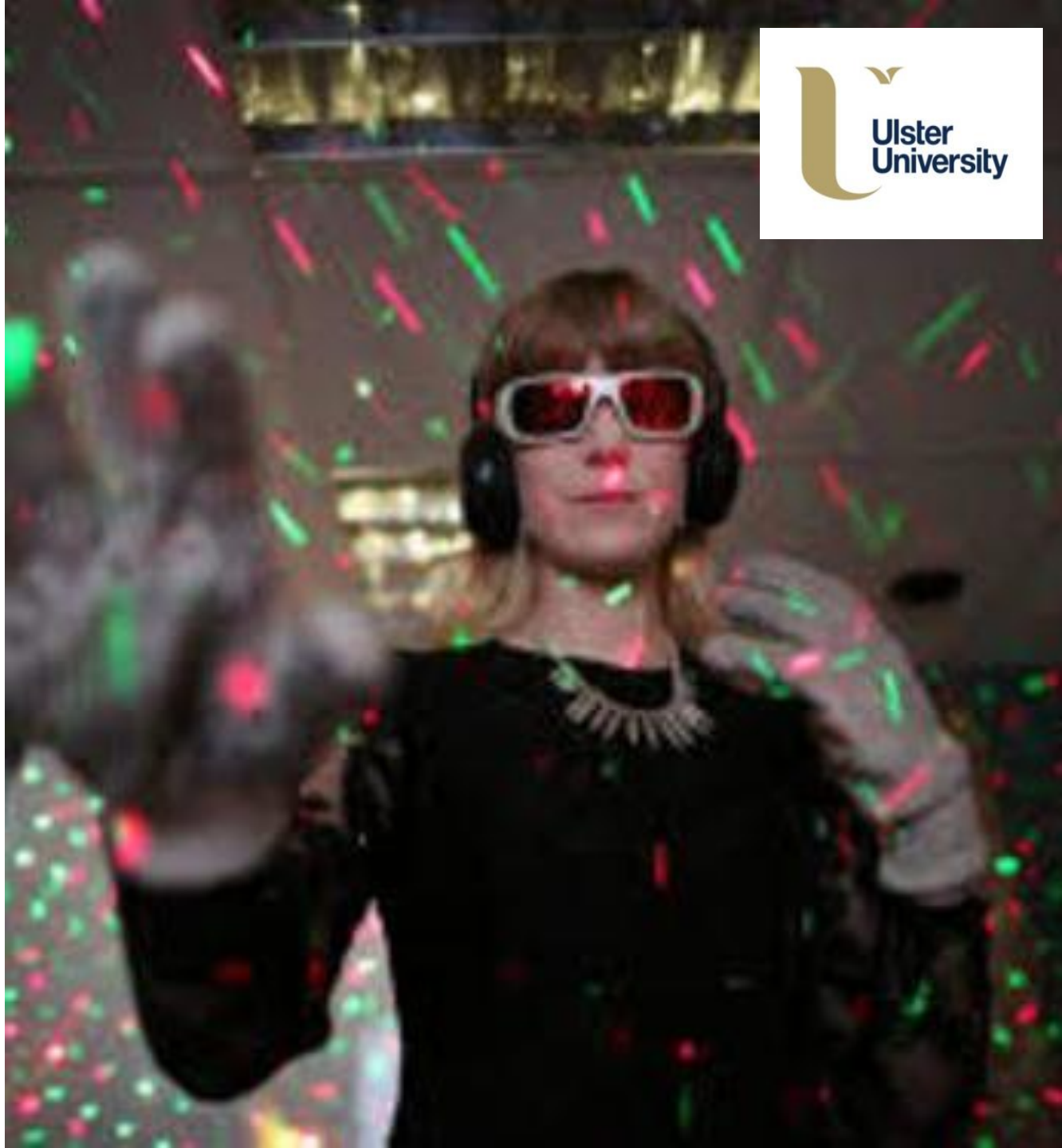
VDT Experience

- Replicates Stage 4 Dementia
- Distorts audio, visual and touch information
- Challenges cognitive decline in structured environment
- Debriefing session



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VDT Experience

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Beville (2002, 2014) reported:

- Increased understand of emotional needs of people with dementia
- Importance of sensitisation to Dementia symptoms and the role they play
- Increased understand of inappropriate behaviour
- Decrease in perceptions that people with dementia get the care they require
- A better understanding of the experience some people with dementia face
- Slater et al., (2019) suggests that the VDT® provides a different way of learning, with participants reporting the emergence of an empathic response

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Methodology

- Research Design - Quasi-Experimental Repeated Methods Design
- Stage One - Quantitative repeated measures design
- Stage Two - Qualitative Focus groups
- Stage Three - Qualitative measure design
- Ethical Approval - University & Trust Governance

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Stage One – Instrument Development

- Based on Fields 5-stage process of Instrument development
- Focus Groups – Purposive sample (n=8), 6%, multiple Health Professionals
- Data Analysis Mayring 4-stage process of inductive analysis

Outcomes

- Pool of 56 items generated measuring broad areas:
- Reviewed by expert panel (n=5) comprising experts in:
  - Instrument development
  - Dementia care
  - Mental health care
  - Palliative care
- Agreed a 26 item questionnaire '*Impact of Dementia Training Inventory*' further reduced to 15 items
- 5-point Likert Scale 'Strongly Disagree – Strongly Agree'

Stage Two – Repeated Measures

- Quasi-experimental repeated measures design (no control group)
- Purposive sample invited to participate (n=223, 92.92%) completed pre and post intervention questionnaires
- Post intervention assessment 30 minutes before and after training (immediacy)
- Focus Groups (n227, 94.58%)

Demographic Spread

YEARS		GENDER		EDUCATION	
18-24	8.4% (n19)	Female	91.5% (n205)	Degree	42.5% (n88)
25 - 34	20.0% (n45)	Male	5.1% (n7)	Postgraduate Diploma	25.6% (n53)
35 - 44	21.8% (n49)	**SETTING**		Masters/PhD	26.1% (n54)
45 - 54	27.6% (n62)	Hospital	25.0% (n53)	Training	31.0% (n70)
55 – 64	17.8% (n40)	Community	70.3% (n149)	No Training	69.0% (n156)
65+	4.4% (n10)	Voluntary	4.7% (n10)		

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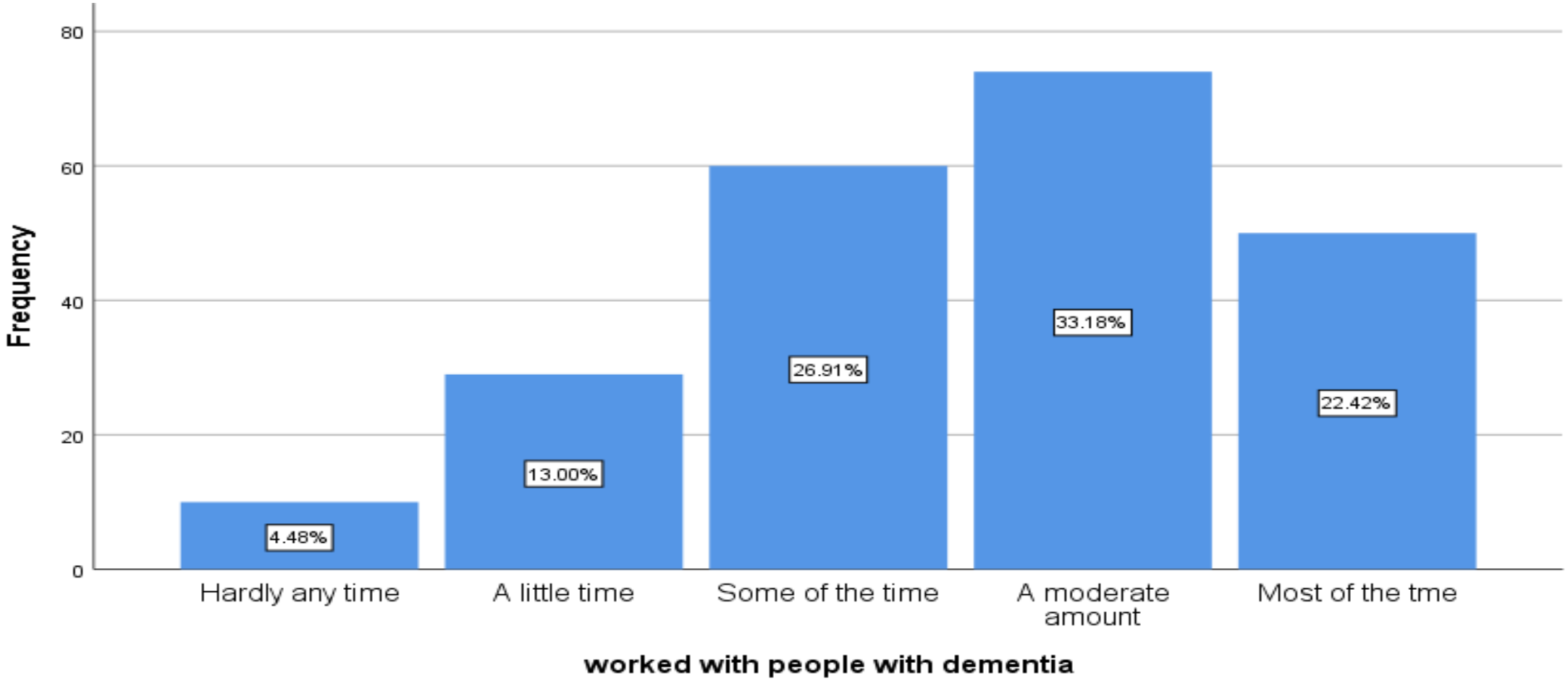
Working with People Living with Dementia



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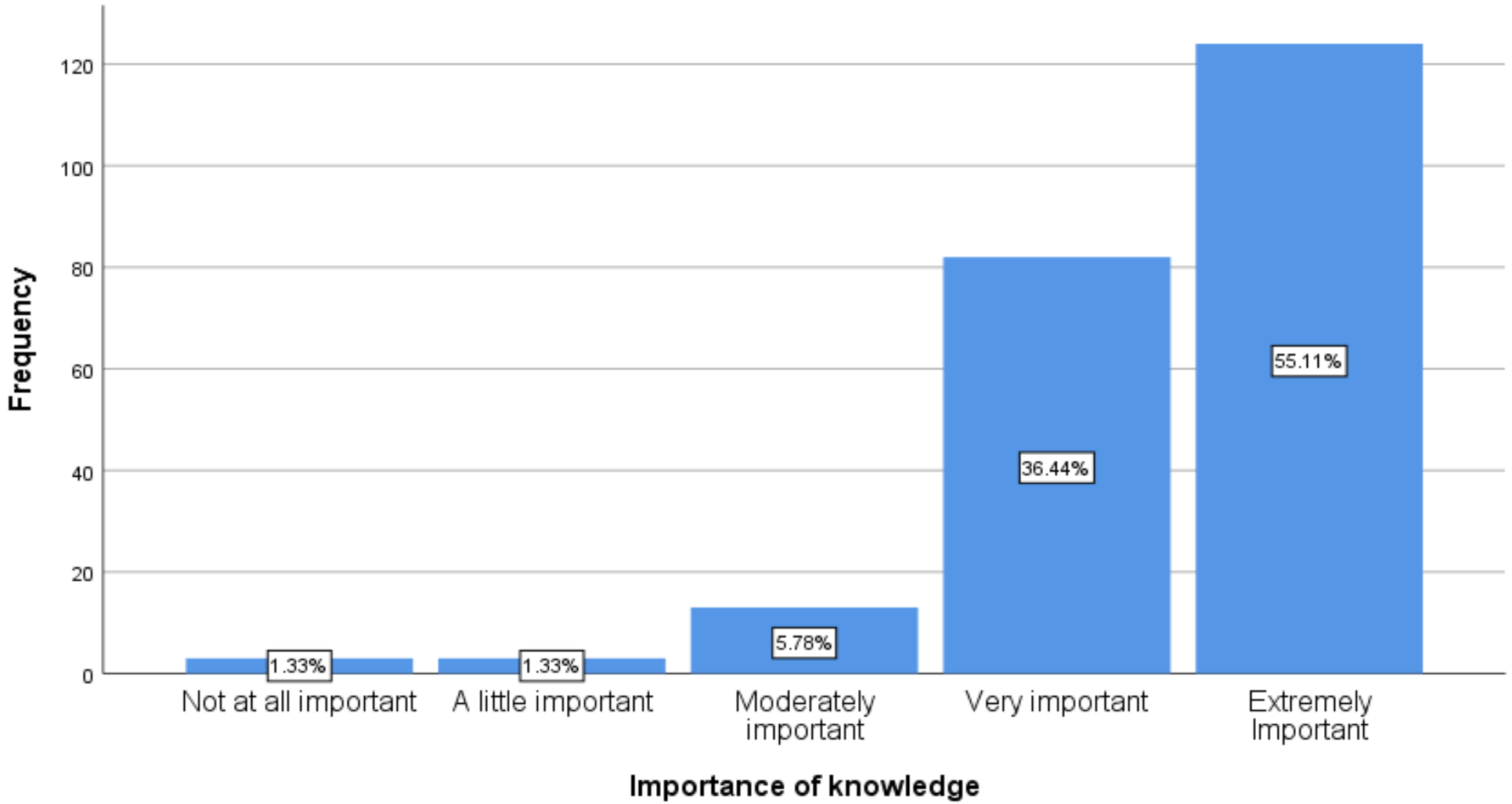
Importance of Knowledge



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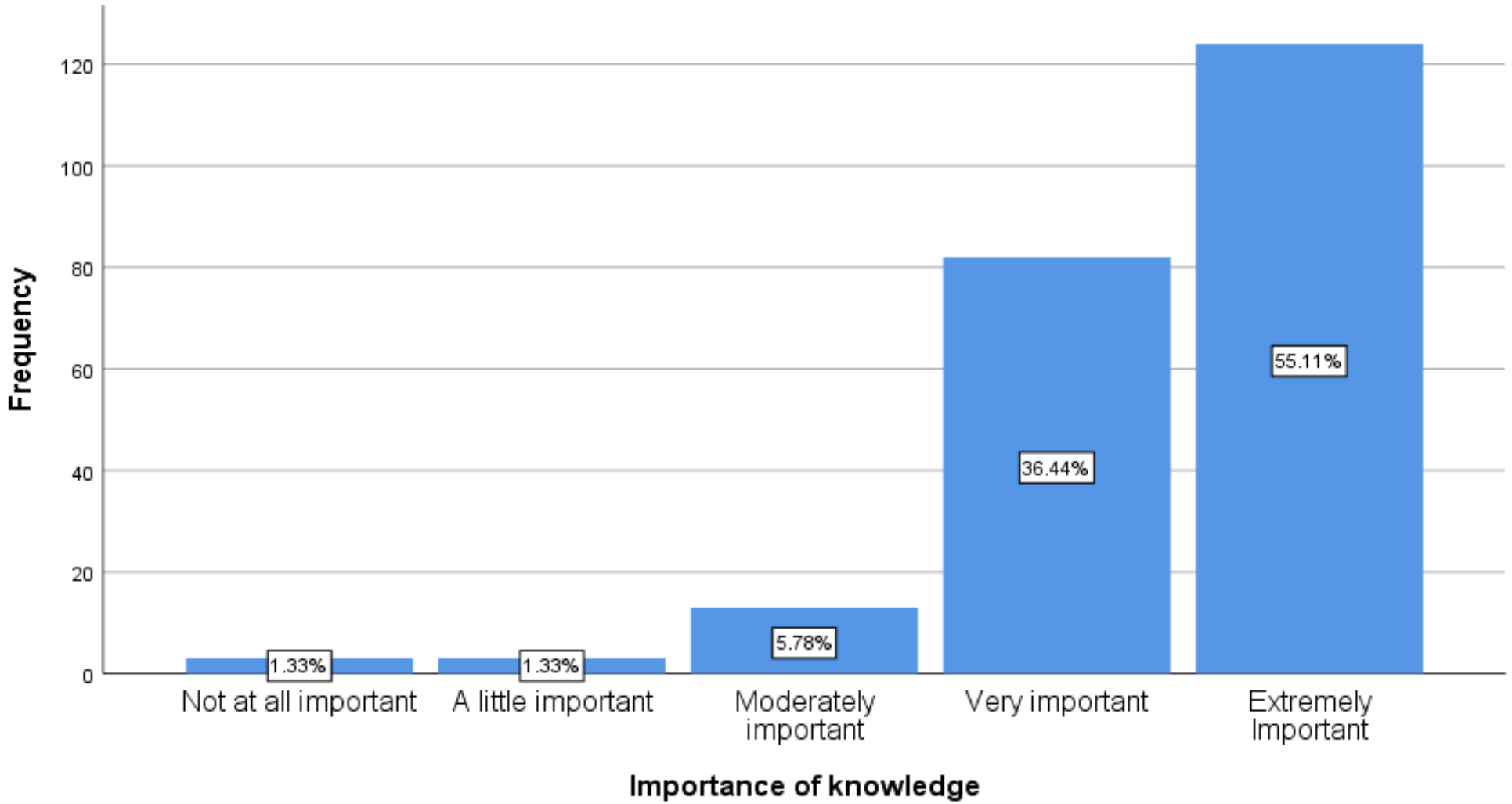
Importance of Knowledge



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Professional Background of Participants

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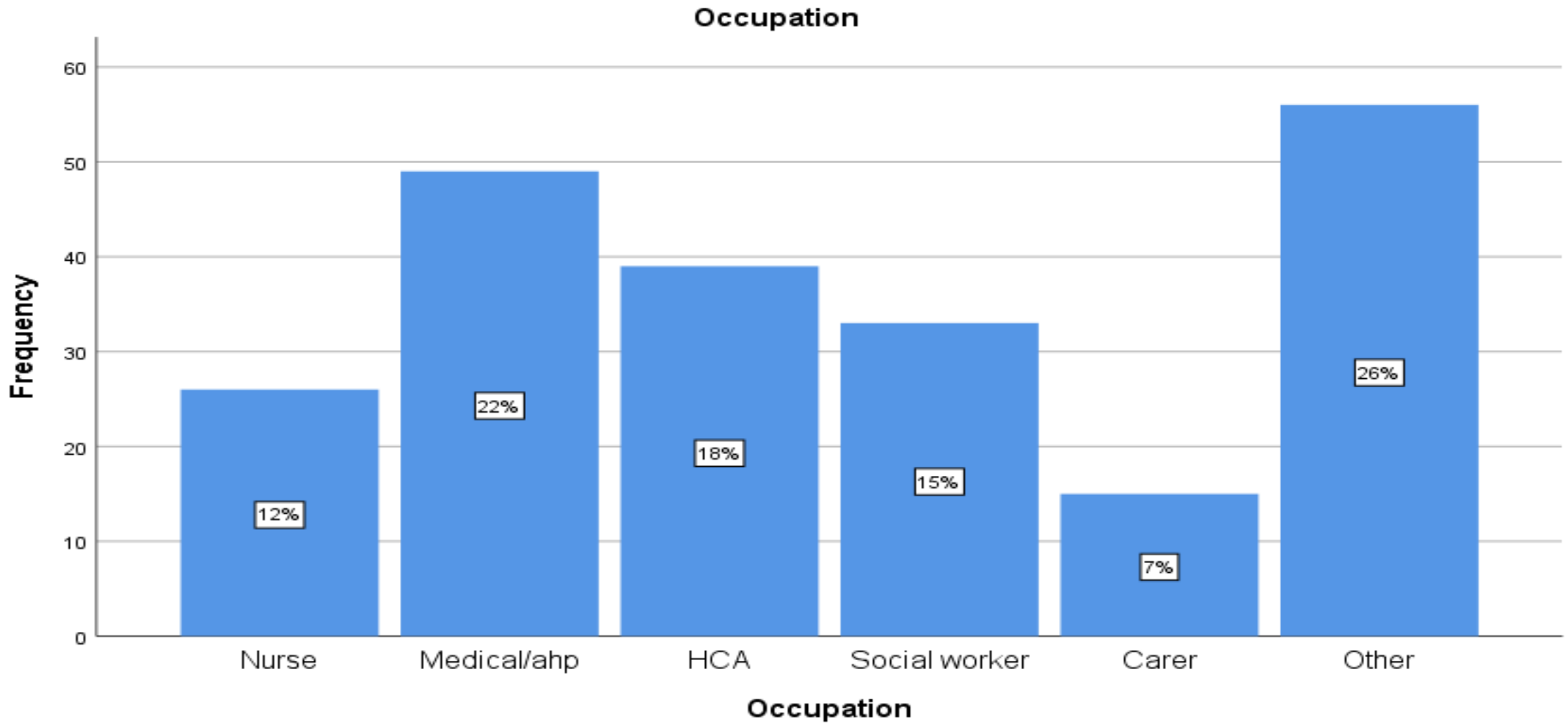

Psychometric Investigation

- Exploratory factor analysis
- Factor loading >0.4
- 3 factor model deemed best:
- Factor 1 –Empathetic understanding of the impact of Dementia
- Factor 2 – Understanding of Behavioural impact of Dementia
- Factor 3 – Provision of Person-centred Care

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Outcomes

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CONSTRUCTS	Pre-Intervention	Post Intervention
Empathetic understanding of the impact of Dementia	2.9	4.21
Understanding of Behavioural impact of Dementia	3.6	4.54
Provision of Person-centred Care	4.23	4.68

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Differences Between Groups

No significance differences between key demographic details at baseline:

- gender
- age
- occupation
- setting
- education

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Reflections on Attitudes and Beliefs

	Pre-Intervention	Post-Intervention
I feel I can understand what it's like to live with dementia	2.71 (54.2%)	4.13 (82.6)
I understand how dementia impacts on the person's thinking.	3.05 (61.0%)	4.22 (84.4%)
I understand how dementia impacts on the person's emotions.	3.15 (63.0%)	4.29 (85.8%)
I feel I can empathise with the emotional position of the person with dementia.	3.37 (67.4%)	4.35 (87.0%)
I feel I understand what it's like to think like a person with dementia.	2.61 (52.2%)	4.05 (81.0%)
I understand how dementia can lead to agitation in people with dementia	3.46 (69.2%)	4.47 (89.4%)
I understand how dementia impacts on the person's physical behaviour.	3.38 (67.6%)	4.45 (89.0%)

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Impact of VDT Experience

- 3-month follow-up - Quantitative Measure Questionnaire (n84 = 37%)
- Purposive sample of participants (n223 = 93%)
- Analysis of the Focus Groups (n227 = 94%)
- Data Analysis Mayring 4-stage process of inductive analysis

Measures of Distribution Across 4 Constructs

Constructs	Pre-Intervention	Post-Intervention	Follow Up
Empathetic Understanding of the impact of Dementia	2.9 (58.0%)	4.21 (85.4%)	4.29 (85.8%)
Understanding of Behavioural impact of Dementia	3.58 (71.60%)	4.54 (90%)	4.74 (94.8%)
Provision of Person-centred Care	4.23 (84.6%)	4.68 (93.6%)	4.78 (95.6%)
Training in Dementia Care	3.47 (69.4%)=none		Impact on attitude 4.86 (97.3%) Approach to practice 4.9 (98.7%)

Findings

- VDT strengthened and reinforced the learning experience by allowing the immersion, interaction and engagement with an imaged world of dementia
  "the emersion in that world was quite beneficial because I think it helped you to be patient centred…"

- The VDT experience enabled participants to reflect upon the human side of caring for someone with dementia to be re-engaged and improved.
  "I thought the training was excellent! It really raised awareness of what it's like with dementia"

Findings

- VDT experience has the potential to enhance empathy and improve holistic person-centered care of people with dementia.

"Until you put yourself in somebody's shoes with that condition you never know what they go through"

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Conclusion

The tool provided to be effective measure of empathy and empathy in action among health professionals in relation to care for people with dementia

It proved an effective measure of empathy and its change over time as a result of an intervention.

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What Next?

New Tool on Empathy in Dementia

Publications

Presentations:

- 29th November, 2018, 3rd International Meeting On Nursing Research and Evidence Based Practice, Madrid, Spain.
- 10th May 2019, International Conference on Palliative Dementia Care, Belfast.
- 5th September 2019, International RCN Research Conference, Sheffield, UK.

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Thank you

For further information

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